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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,549	07/25/2002	Harry Israel Ringermacher	RD-28294	1282
6147	7590	05/18/2005	EXAMINER	
GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309			KALIVODA, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			2883	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,549

Applicant(s)

RINGERMACHER ET AL.

Examiner

Christopher M. Kalivoda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment received 02/18/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8-10,12-15,18-30,33-39 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,8-10,12-15,18-23,33-39 and 41 is/are allowed.
- 6) ☒ Claim(s) 24-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 25, 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 051305
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Response to Arguments

Applicant's arguments, filed February 18, 2005, with respect to claims 1, 3, 4, 8-10, 12-15, 18-23, 33-39 and 41 have been fully considered and are persuasive. The rejection of these claims has been withdrawn.

However, the arguments with respect to claims 24 -30 are not persuasive since Izumi also teaches the digital image can conform to a surface of the subject (please see below).

Consequently, this office action is made final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5-16-05
Claims ^{27 are} ~~24~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi, U.S. Patent 6,717,152.

Regarding independent claim 24, Izumi teaches a digital imaging method (col 4, lines 22-25) for imaging a subject comprising conforming a digital imager to the surface of a subject (col 11, lines 40-42, 55-57 and 62-65).

While in this configuration, i.e. conformed to the surface of a subject, the reference does not specifically state "the subject being positioned between the digital

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imager and a radiation source", "activating a radiation source to expose the subject to radiation" and "collecting an image with the digital imager". Clearly this method is at least inferred since the inventor teaches the imager can conform to the shape of a detection target as described above. In addition, the target is broadly interpreted to mean any target. In addition, the radiation source would have to be activated with the target between the source and imager in order to produce a digital image.

Regarding claims 25-26, the digital imager comprises a plurality of photosensors arranged in a linear array or two dimensional array since the photosensors are arranged to form a plurality of columns and at least one row (col 6, lines 1-7).

Regarding claim 27, the source is an x-ray source (col 11, lines 7-11).

Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi, U.S. Patent 6,717,152 in view of Sorenson, U.S. Patent 6,636,581. Regarding claims 28-30, Izumi teaches the limitations as described above. Although Izumi teaches the imager can be made into any arbitrary shape and is flexible to conform with the shape of a detection target (col 11, lines 40-42 and 62-65), the inventor is silent with respect to using the device to image a portion of an airplane, or wrapping the detector around the fuselage or wing.

Sorenson teaches that x-ray inspection of aging aircraft would provide superior detection of cracks (col 1, lines 33-35).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to wrap the imager around an aircraft fuselage or wing to obtain an x-ray image of the fuselage or wing.

The motivation for using the imager of Izumi with an aircraft fuselage or wing is that x-ray imaging for crack detection is superior and the panels and insulation would not have to be removed (col 1, lines 35-37).

Allowable Subject Matter

Claims 1, 3, 4, 8-10, 12-15, 18-23, 33-39 and 41 are allowed for the following reasons:

The instant application is deemed to be directed to a non-obvious improvement over the invention patented in Pat. No. 6,717,152 to Izumi.

Independent claims 1 and 39 are allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious an imager for imaging a subject illuminated by incident radiation, the imager comprising TFTs with a semiconductive region comprising an organic semiconductor and disposed over the gate electrode and a source electrode and drain electrode in contact with the semiconductive region in combination with the rest of the limitations of the base claim.

Independent claim 8 is allowed for the reasons stated in the previous office action (Paper 110904).

Independent claim 15 is allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious a digital imager for imaging a subject

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illuminated by incident radiation, the imager comprising a back surface layer disposed on a back surface of the substrate, the back surface layer comprising a plurality of heating elements in combination with the rest of the limitations of the base claim.

Independent claim 33 is allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious a digital imaging method for imaging a subject, the method comprising embedding at least one digital imager in the subject in combination with the rest of the limitations of the base claim.

Claims 12; 3, 4, 9, 10, 13-14; 18-23; 34-38; and 41 depend on claims 1, 8, 15, 33 and 39 respectively and therefore they are also allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Frank G. Font
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